

**CURRICULUM VITAE****Dr Brian Robert Walker****DOB 12/7/63 British****Degrees etc**

1984	BSc (1st class Hons)	Immunology	University of Edinburgh
1986	MB ChB		University of Edinburgh
1989	MRCP (UK)		
1993	MD (with Distinction)		University of Edinburgh
1999	FRCP Edinburgh		

**Current Appointments**

- British Heart Foundation Senior Research Fellow (since Nov 1996)  
Honorary Consultant Physician, Western General Hospital (since Nov 1996)  
Member of Scientific Advisory Board, Wellcome Trust Cardiovascular Research Initiative and  
Centre for Cardiovascular Biology, University of Edinburgh (since Aug 1998)  
Associate Director, Clinical Research Centre, University of Edinburgh (since June 1999)  
Reader in Medicine, University of Edinburgh (since Oct 1999)  
Director, GCMS Core Laboratory, Wellcome Trust Clinical Research Facility, Edinburgh (since  
Dec 1999)

**Previous Appointments**

1993-6	Lecturer in Medicine	University of Edinburgh
1992-3	Sir Stanley Davidson Lecturer in Medicine	University of Edinburgh
1989-93	MRC Training Fellow	University of Edinburgh
1987-89	SHO Rotation	Western Infirmary Glasgow

**Postgraduate Prizes**

- William Leslie Prize for research awarded by University of Edinburgh Faculty of Medicine,  
1991  
Shortlisted for Young Investigator Award at the British Hypertension Society, Dublin, 1991  
Finalist in Medical Research Society Young Investigator Prize competition, London, 1993  
Wilfrid Card Lectureship and Medal, Edinburgh, 1994  
Young Endocrinologist Award at the British Endocrine Societies, Warwick, 1995  
Poster Prize at the Society for Endocrinology, London, 1995  
Young Investigator Award at the International Society of Hypertension, Glasgow, 1996  
Merck Senior Fellow Award at the International Congress of Endocrinology, San Francisco,  
1996  
British Hypertension Society Cardiovascular Research Travelling Fellowship to visit University  
of Umea, Sweden, 1997  
Young Investigator Award at the British Hypertension Society, Bristol, 1997  
Short-listed for the Austin Doyle Award at the International Society for Hypertension,  
Amsterdam, 1998  
Special Travel Award to the International Society for Hypertension, Chicago, 2000

*Academic recognition and activities*

Member of Editorial Board for Clinical Endocrinology 1999-

Senior Editor for Journal of Endocrinology 2000-

Refereed grant applications for British Heart Foundation, Wellcome Trust, Medical Research Council, and British Diabetic Association; reviewed numerous manuscripts for diverse journals; examined 5 postgraduate theses

In year 2000, invited to lecture in Umea (Sweden), Gothenburg (Sweden), Phoenix (USA), Monte Carlo (Monaco), and Nice (France); also lecturer at British Endocrine Societies Joint Meetings in 1998 and 1999, and at Association of Clinical Biochemists in Glasgow 1998.

**RELEVANT PUBLICATIONS****Peer-Reviewed Publications**

Dr Walker is author of more than 50 peer-reviewed articles since 1990. The following are especially relevant to 11 $\beta$ -hydroxysteroid dehydrogenases:

1. Walker BR, Yau JL, Brett LP, Seckl JR, Monder C, Williams BC, Edwards CRW (1991) 11 $\beta$ -Hydroxysteroid dehydrogenase in vascular smooth muscle and heart: implications for cardiovascular responses to glucocorticoids. *Endocrinology*, 129: 3305-3312.
2. Walker BR, Edwards CRW (1991) 11 $\beta$ -Hydroxysteroid dehydrogenase and enzyme-mediated receptor protection: Life after liquorice? *Clinical Endocrinology*, 95: 281-289.
3. Walker BR, Connacher AA, Webb DJ, Edwards CRW (1992) Glucocorticoids and blood pressure: a role for the cortisol/cortisone shuttle in the control of vascular tone in man. *Clinical Science*, 83: 171-178.
4. Walker BR, Moisan M-P (1992) Multiple isoforms of the cortisol-cortisone shuttle. *Journal of Endocrinology*, 133: 1-3.
5. Walker BR, Campbell JC, Williams BC, Edwards CRW (1992) Rapid Communication: Tissue-specific distribution of the NAD<sup>+</sup>-dependent isoform of 11 $\beta$ -hydroxysteroid dehydrogenase. *Endocrinology*, 131: 970-972.
6. Walker BR, Campbell JC, Fraser R, Stewart PM, Edwards CRW (1992) Mineralocorticoid excess and inhibition of 11 $\beta$ -hydroxysteroid dehydrogenase in patients with ectopic ACTH syndrome. *Clinical Endocrinology*, 97: 483-492.
7. Walker BR, Stewart PM, Shackleton CHL, Padfield PL, Edwards CRW (1993) Deficient inactivation of cortisol by 11 $\beta$ -hydroxysteroid dehydrogenase in essential hypertension. *Clinical Endocrinology*, 99: 221-227.
8. Walker BR, Sang KS, Williams BC, Edwards CRW (1994) Direct and indirect effects of carbinoxolone on responses to glucocorticoids and noradrenaline in rat aorta. *Journal of Hypertension*, 12: 33-39.
9. Walker BR, Williams BC, Edwards CRW (1994) Regulation of 11 $\beta$ -hydroxysteroid dehydrogenase activity by the hypothalamic-pituitary-adrenal axis in the rat. *Journal of Endocrinology*, 141: 467-472.
10. Walker BR, Aggarwal I, Padfield PL, Stewart PM, Edwards CRW (1995) Endogenous inhibitors of 11 $\beta$ -hydroxysteroid dehydrogenase in hypertension. *Journal of Clinical Endocrinology and Metabolism*, 133: 529-533.

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11. Walker BR, Williamson PM, Brown MA, Honour JW, Edwards CRW, Whitworth JA (1995) 11 $\beta$ -Hydroxysteroid dehydrogenase and its inhibitors in hypertensive pregnancy. *Hypertension*, 25: 626-630.
12. Walker BR, Connacher AA, Lindsay RM, Webb DJ, Edwards CRW (1995) Carbenoxolone increases hepatic insulin sensitivity in man: a novel role for 11-oxosteroid reductase in enhancing glucocorticoid receptor activation. *Journal of Clinical Endocrinology and Metabolism*, 80: 3155-3159.
13. Stewart PM, Walker BR, Holder G, O'Halloran D, Shackleton CHL (1995) 11 $\beta$ -Hydroxysteroid dehydrogenase activity in Cushing's syndrome: explaining the mineralocorticoid excess state of the ectopic adrenocorticotropin syndrome. *Journal of Clinical Endocrinology and Metabolism*, 80: 3617-3620.
14. Best R, Nelson SM, Walker BR (1997) Dexamethasone and 11-dehydrodexamethasone as tools to investigate the isozymes of 11 $\beta$ -hydroxysteroid dehydrogenase *in vitro* and *in vivo*. *Journal of Endocrinology*, 135: 41-48.
15. Best R, Walker BR (1997) Additional value of measurement of urinary cortisone and unconjugated cortisol metabolites in assessing the activity of 11 $\beta$ -hydroxysteroid dehydrogenase *in vivo*. *Clinical Endocrinology*, 47: 231-236.
16. Walker BR, Best R, Noon JP, Watt GCM, Webb DJ (1997) Seasonal variation in glucocorticoid activity in healthy men. *Journal of Clinical Endocrinology and Metabolism*, 82: 4015-4019.
17. Walker BR, Phillips DIW, Noon JP, Panarelli M, Best R, Edwards HV, Holton DW, Seckl JR, Webb DJ, Watt GCM (1998) Rapid Communication: Increased glucocorticoid activity in men with cardiovascular risk factors. *Hypertension*, 31: 891-895.
18. Andrew R, Phillips DIW, Walker BR (1998) Rapid Communication: Obesity and gender influence cortisol secretion and metabolism in man. *Journal of Clinical Endocrinology and Metabolism*, 83: 1806-1809.
19. Walker BR, Andrew R, MacLeod KM, Padfield PL (1998) Growth hormone replacement inhibits renal and hepatic 11 $\beta$ -hydroxysteroid dehydrogenases in ACTH-deficient patients. *Clinical Endocrinology*, 49: 257-263.
20. Jamieson PM, Nyirenda MJ, Walker BR, Chapman KE, Seckl JR (1999) Interactions between oestradiol and glucocorticoid regulatory effects on liver-specific glucocorticoid-inducible genes: possible evidence for a role of hepatic 11 $\beta$ -hydroxysteroid dehydrogenase type 1. *Journal of Endocrinology*, 160: 103-109.
21. Andrews RC, Walker BR (1999) Glucocorticoids and insulin resistance: old hormones, new targets. *Clinical Science*, 96: 513-523.
22. Jamieson A, Wallace AM, Walker BR, Andrew R, Fraser R, White PC, Connell JMC (1999) Apparent cortisone reductase deficiency: a functional defect in 11 $\beta$ -hydroxysteroid dehydrogenase type 1. *Journal of Clinical Endocrinology and Metabolism*, 84: 3570-3574.
23. Finken MJJ, Andrews RC, Andrew R, Walker BR (1999) Cortisol metabolism in healthy young adults: sexual dimorphism in activities of A-ring reductase but not 11 $\beta$ -hydroxysteroid dehydrogenases. *Journal of Clinical Endocrinology and Metabolism*, 84: 3316-3321.
24. Walker BR, Rodin A, Taylor NF, Clayton RN (2000) Endogenous inhibitors of 11 $\beta$ -hydroxysteroid dehydrogenase type 1 do not explain abnormal cortisol metabolism in polycystic ovarian syndrome. *Clinical Endocrinology*, 52: 77-80.
25. Livingstone DEW, Jones GC, Smith K, Jamieson PM, Andrew R, Kenyon CJ, Walker BR (2000) Understanding the role of glucocorticoids in obesity: tissue-specific alterations of corticosterone metabolism in obese Zucker rats. *Endocrinology*, 141: 560-563.
26. Jamieson PM, Walker BR, Chapman KE, Rossiter S, Seckl JR (2000) 11 $\beta$ -Hydroxysteroid dehydrogenase type 1 is a predominant 11 $\beta$ -reductase in the intact perfused rat liver. *Journal of Endocrinology*, 165: 685-692.

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27. Baker RW, Walker BR, Shaw RJ, Honour JW, Zumla A, Lightman SL, Rook GAW (2000) Increased cortisol/cortisone ratio in acute pulmonary tuberculosis. *American Journal of Respiratory and Critical Care Medicine*, 162: 1641-1647.
28. Mangos G, Walker BR, Kelly JJ, Lawson J, Webb DJ, Whitworth JA (2000) Cortisol inhibits cholinergic dilatation in the human forearm: towards an explanation for glucocorticoid-induced hypertension. *American Journal of Hypertension*, 13: 1155-1160.
29. Irving RJ, Belton NR, Elton RA, Walker BR (2000) Adult cardiovascular risk factors in premature babies. *Lancet*, 355: 2135-2136.
30. Ebrecht M, Buske-Kirschbaum A, Hellhammer DH, Kern S, Rohleder N, Walker BR, Kirschbaum G (2000) Tissue specificity of glucocorticoid sensitivity in healthy adults. *Journal of Clinical Endocrinology and Metabolism*, 85: 3733-3739.
31. Livingstone DEW, Kenyon CJ, Walker BR (2000) Mechanisms of dysregulation of 11 $\beta$ -hydroxysteroid dehydrogenase type 1 in Zucker obese rats. *Journal of Endocrinology*, 167: 533-539.
32. Yong PYK, Thong KJ, Andrew R, Walker BR, Hillier SG (2000) Development related increase in cortisol biosynthesis by human granulosa cells. *Journal of Clinical Endocrinology and Metabolism*, 85: 4728-4733.
33. Reynolds RM, Walker BR, Phillips DIW, Sydall HE, Andrew R, Wood PJ, Whorwood CB (2001) Altered control of cortisol secretion in adult men with low birthweight and cardiovascular risk factors. *Journal of Clinical Endocrinology and Metabolism*, 86: 245-250.
34. Rasmuson S, Andrew R, Nasman B, Seckl JR, Walker BR, Olsson T (2001) Increased cortisol production rate and altered glucocorticoid metabolism in women with mild to moderate Alzheimer's Disease. *Biological Psychiatry*, (in press).
35. Rask E, Olsson T, Soderberg S, Andrew R, Livingstone DEW, Johnson O, Walker BR (2000) Tissue-specific dysregulation of cortisol metabolism in obesity. *Journal of Clinical Endocrinology and Metabolism*, (in press).
36. Seckl JR, Walker BR (2001) 11 $\beta$ -Hydroxysteroid dehydrogenase type 1: tissue-specific amplifier of glucocorticoid action. *Endocrinology*, (in press).
37. Reynolds RM, Walker BR, Sydall HE, Wood PJ, Phillips DIW (2001) Elevated plasma cortisol in glucose intolerant men: different responses to glucose and habituation to venepuncture. *Journal of Clinical Endocrinology and Metabolism*, (in press).

**Non-Peer-Reviewed Articles and Book Chapters**

Dr Walker is author of more than 30 reviews and book chapters relating to glucocorticoid biology, including the following which are most relevant to 11 $\beta$ -hydroxysteroid dehydrogenases:

1. Walker BR, Edwards CRW (1992) Clinical disorders of 11 $\beta$ -hydroxysteroid dehydrogenase activity. In *Recent Advances in Endocrinology and Metabolism* (Volume 4) edited by Edwards CRW & Lincoln D. Churchill Livingstone, Edinburgh; pp.21-38.
2. Walker BR, Edwards CRW (1993) 11 $\beta$ -Hydroxysteroid dehydrogenase activity in hypertension and renal disease. *Advances in Nephrology*, 22: 329-347.
3. Edwards CRW, Walker BR, Benediktsson R, Seckl JR (1993) Congenital and acquired syndromes of apparent mineralocorticoid excess. *Journal of Steroid Biochemistry and Molecular Biology*, 45: 1-5.
4. Walker BR (1993) Defective enzyme-mediated protection of corticosteroid receptors: novel mechanisms in the pathophysiology of hypertension. *Clinical Science*, 85: 257-263.
5. Stewart PM, Whorwood CB, Walker BR (1993) Steroid hormones and hypertension: the cortisol - cortisone shuttle. *Steroids*, 58: 614-620.

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6. Edwards CRW, Walker BR (1993) Cortisol and hypertension: what was not so apparent about 'Apparent Mineralocorticoid Excess'. *Journal of Laboratory and Clinical Medicine*, 122: 632-635.
7. Walker BR, Edwards CRW (1994) Hypermineralocorticoidism due to abnormal metabolism of cortisol. *Current Opinions in Endocrinology and Diabetes*, 1: 109-116.
8. Walker BR (1994) Organ-specific actions of 11 $\beta$ -hydroxysteroid dehydrogenase in humans: implications for the pathophysiology of hypertension. *Steroids*, 59: 84-89.
9. Walker BR, Edwards CRW (1994) Licorice-induced hypertension and syndromes of apparent mineralocorticoid excess. *Endocrinology and Metabolism Clinics of North America*, 23: 359-377.
10. Walker BR, Best R (1995) Clinical investigation of 11 $\beta$ -hydroxysteroid dehydrogenase. *Endocrine Research*, 21: 379-387.
11. Benediktsson R, Walker BR, Edwards CRW (1995) Cellular selectivity of aldosterone action: role of 11 $\beta$ -hydroxysteroid dehydrogenase. *Current Opinions in Nephrology and Hypertension*, 4: 41-46.
12. Walker BR, Stewart PM, Edwards CRW (1997) Enzyme modulation of access to corticosteroid receptors. In: *Principles of Medical Biology* edited by Bittar EE & Bittar N. JAI Press, Greenwich, Connecticut; Vol 10A, 261-274.
13. Walker BR (1996) Abnormal glucocorticoid activity in subjects with risk factors for cardiovascular disease. *Endocrine Research*, 22: 701-708.
14. Walker BR (1997) Modulation of glucocorticoid activity by metabolism of steroids in non-lymphoid organs. In: *Steroid hormones and the T-cell cytokine profile*. Rook GAW and Lightman S (eds) Springer-Verlag, London; pp 71-99.
15. Walker BR (1998) Glucocorticoid sensitivity in humans. *Current Opinion in Endocrinology and Diabetes*, 5: 168-174.
16. Walker BR (1999) Cortisol secretion and sensitivity in insulin resistance. In *Insulin Resistance and Cardiovascular Disease*, O'Rahilly S (ed), Bioscientifica, Bristol, 29-40.
17. Rook G, Baker R, Walker B, Honour J, Jessop D, Hernandez-Pando R, Arriaga K, Shaw R, Zumla A, Lightman S (1999) Local regulation of glucocorticoid activity in sites of inflammation; insights from the study of tuberculosis. *Annals of the New York Academy of Sciences*, (in press).
18. Walker BR (2000) Cortisol in insulin resistance syndromes. In *The Diabetes Annual 13*, Butler PC, Rizza RA, Walker M (eds), Elsevier Science, Amsterdam, (in press).
19. Walker BR (2000) How will we know if 11 $\beta$ -hydroxysteroid dehydrogenases are important in common diseases? *Clinical Endocrinology*, 52: 401-402..
20. Walker BR, Seckl JR (2000) Cortisol metabolism. In *International Textbook of Obesity*, Björntorp P (ed), John Wiley & Sons, Chichester, (in press).

**Books**

1. Seckl JR, Walker BR (eds) (2000) *Bailliere's Best Practice and Research in Clinical Endocrinology and Metabolism: Disorders of Steroid Metabolism*. Baillière Tindall, London, (in press).

**Abstracts & Letters**

Dr Walker is author of >130 published abstracts and letters.